PCBL

COMPANY UPDATE

KEY DATA

Rating	BUY
Sector relative	Outperformer
Price (INR)	254
12 month price target (INR)	279
52 Week High/Low	268/108
Market cap (INR bn/USD bn)	96/1.2
Free float (%)	47.0
Avg. daily value traded (INR mn)	964.6

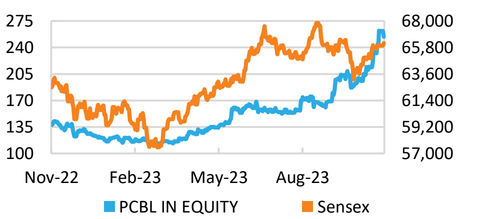
SHAREHOLDING PATTERN

	Mar-23	Dec-22	Sep-22
Promoter	51.41%	51.41%	51.41%
FII	6.34%	8.58%	10.89%
DII	9.4%	8.39%	6.47%
Pledge	0%	0%	0%

FINANCIALS (INR mn)

Year to March	FY23A	FY24E	FY25E	FY26E
Revenue	58,739	51,568	58,105	64,120
EBITDA	7,364	10,126	12,095	13,530
Adjusted profit	4,441	6,301	7,434	8,177
Diluted EPS (INR)	11.8	16.7	19.7	21.7
EPS growth (%)	4.0	41.9	18.0	10.0
RoAE (%)	16.4	20.6	20.8	19.7
P/E (x)	11.2	7.9	6.7	6.1
EV/EBITDA (x)	7.7	6.0	4.9	4.2
Dividend yield (%)	3.0	3.2	3.7	4.1

PRICE PERFORMANCE



Adding whitener to its carbon black

PCBL, in pursuit of its aggressive growth (organic and inorganic) and to move its product basket towards speciality, announced it would acquire Aquapharm Chemicals (ACPL) at a consideration of INR38bn (9.1x FY23 EV/EBITDA). ACPL is the second largest player globally with key products such as phosphonates, biodegradable chelating agents, polymers, etc. used in detergents, industrial cleaners, oil fields etc.

Though recognising near-term stress on its balance sheet (net debt/EBITDA > 3.5x in FY24), we believe this acquisition would upgrade its business model, margin profile and drive re-rating. Hence, we are raising target EV/EBITDA multiple to 8x (from 6x) and increasing TP to INR279 (from INR209) based on Q3FY26 EBITDA. Retain 'BUY'.

Aggressive acquisition to diversify product basket

PCBL announced it would acquire ACPL for INR38bn. ACPL is in the business of manufacturing specialty products offering water treatment solutions to marquee global customers across diverse end-markets (exports > 80%). These specialty chemicals (water treatment chemicals like phosphonates, biodegradable chelating agents, polymers, biocides, oil field chemicals, etc. that have application in water treatment, detergents, industrial cleaners, oilfields, municipal water treatment, pulp and paper, water softening, surface cleaning, pharma, agrochem applications, etc, enjoy long approval cycles and sticky customer relationships with MNCS like P&G, Unilever Henkel, etc. This marks PCBL's foray into speciality chemicals, diversifies its product basket from carbon black to high-end speciality basket and complements its pursuit to drive share of overall speciality in its entire product basket.

Valuations favourable, but leveraged buyout a concern

ACPL with FY23 sales/EBITDA of INR20bn/4.2bn is valued at 9.1x EV/EBITDA. Still, given current year global weakness and margin pressure, we expect FY24 to see moderation in profitability at ~INR3.5bn. As acquisition shall be funded via debt, internal cash flows, we expect year-end debt to go up to INR40bn with expected average interest cost of 9-9.5%. Though management is confident of the deal being earnings accretive, we expect it to drag earnings near FY24E/25E, given industry weakness. Expect net debt/EBITDA to cross 3.5x with debt/equity of ~1x in FY24.

Detergent and marquee customer to add whitener to its business

We forecast PCBL to be in transition to move up its product basket while continuing to drive share of value added and speciality. Though organically, it is focused on driving share of speciality black versus carbon black, we believe its further focus on driving products catering to batteries for EV coupled with this acquisition would rerate its business model and margin profile. As the stock is trading at a significant discount to speciality chemicals (16x EV/EBITDA versus 6x assigned to PCBL), we value the stock at 8x with a TP of INR279. Reiterate '**BUY**'.

As the acquisition is likely to be completed by year-end, we have not consolidated the financials of the target company.

Rohan Gupta
Rohan.Gupta@nuvama.com

Financial Statements

Income Statement (INR mn)

Year to March	FY23A	FY24E	FY25E	FY26E
Total operating income	58,739	51,568	58,105	64,120
Gross profit	14,265	18,045	20,753	22,930
Employee costs	1,903	1,979	2,058	2,140
Other expenses	4,998	5,940	6,600	7,260
EBITDA	7,364	10,126	12,095	13,530
Depreciation	1,366	1,614	1,896	2,087
Less: Interest expense	534	540	498	416
Add: Other income	384	326	355	340
Profit before tax	5,848	8,298	10,055	11,368
Prov for tax	1,407	1,997	2,621	3,190
Less: Other adj	0	0	0	0
Reported profit	4,441	6,301	7,434	8,177
Less: Excp.item (net)	0	0	0	0
Adjusted profit	4,441	6,301	7,434	8,177
Diluted shares o/s	378	378	378	378
Adjusted diluted EPS	11.8	16.7	19.7	21.7
DPS (INR)	4.0	4.2	4.9	5.4
Tax rate (%)	24.1	24.1	26.1	28.1

Balance Sheet (INR mn)

Year to March	FY23A	FY24E	FY25E	FY26E
Share capital	378	378	378	378
Reserves	27,819	32,545	38,120	44,253
Shareholders funds	28,196	32,922	38,498	44,631
Minority interest	0	0	0	0
Borrowings	7,127	13,042	12,042	10,042
Trade payables	9,497	10,218	11,345	12,474
Other liabs & prov	3,427	5,383	5,383	5,383
Total liabilities	50,162	63,479	69,181	74,444
Net block	19,992	26,599	28,928	31,074
Intangible assets	7	9	9	9
Capital WIP	2,855	2,794	3,794	4,794
Total fixed assets	22,853	29,402	32,732	35,877
Non current inv	13,100	13,100	13,100	13,100
Cash/cash equivalent	421	2,175	2,423	2,534
Sundry debtors	11,078	11,302	12,735	14,054
Loans & advances	5	5	5	5
Other assets	6,838	10,237	10,929	11,617
Total assets	50,162	63,479	69,181	74,444

Important Ratios (%)

Year to March	FY23A	FY24E	FY25E	FY26E
Specialty Chemicals	44,686.1	54,686.1	64,686.1	75,000.0
Performance chemical	1,38,848.2	1,48,848.2	1,58,848.2	1,68,848.2
Tyre	3,01,465.7	3,36,465.7	3,76,465.7	4,16,151.8
EBITDA margin (%)	12.5	19.6	20.8	21.1
Net profit margin (%)	7.6	12.2	12.8	12.8
Revenue growth (% YoY)	32.1	(12.2)	12.7	10.4
EBITDA growth (% YoY)	12.3	37.5	19.4	11.9
Adj. profit growth (%)	4.0	41.9	18.0	10.0

Free Cash Flow (INR mn)

Year to March	FY23A	FY24E	FY25E	FY26E
Reported profit	4,441	6,301	7,434	8,177
Add: Depreciation	1,366	1,614	1,896	2,087
Interest (net of tax)	406	410	368	299
Others	(595)	130	130	(951)
Less: Changes in WC	1,600	(2,593)	(1,182)	0
Operating cash flow	7,218	5,862	8,646	9,612
Less: Capex	(2,894)	(7,981)	(5,042)	(5,042)
Free cash flow	4,324	(2,119)	3,605	4,571

Assumptions (%)

Year to March	FY23A	FY24E	FY25E	FY26E
GDP (YoY %)	6.4	5.8	6.3	6.3
Repo rate (%)	6.0	5.5	5.0	5.0
USD/INR (average)	80.0	78.0	77.0	77.0
Volumes (MT)	4,85,000.0	5,40,000.0	6,00,000.0	6,60,000.0
Crude Prices (USD)	91.2	75.0	70.0	70.0
Specialty Product	9.2	10.1	10.8	11.4
EBITDA/tonne	15,184.1	18,752.4	20,157.9	20,499.6
Realisation	1,75,291.7	1,47,272.7	1,48,860.8	1,48,860.8
Non-Speciality - real	1,00,664.8	86,785.7	87,721.5	87,721.5

Key Ratios

Year to March	FY23A	FY24E	FY25E	FY26E
RoE (%)	16.4	20.6	20.8	19.7
RoCE (%)	18.7	21.7	21.9	22.4
Inventory days	45	70	82	82
Receivable days	69	79	75	76
Payable days	76	107	105	106
Working cap (% sales)	12.9	20.3	19.7	19.3
Gross debt/equity (x)	0.3	0.4	0.3	0.2
Net debt/equity (x)	0.2	0.3	0.2	0.2
Interest coverage (x)	11.2	15.8	20.5	27.5

Valuation Metrics

Year to March	FY23A	FY24E	FY25E	FY26E
Diluted P/E (x)	11.2	7.9	6.7	6.1
Price/BV (x)	1.8	1.5	1.3	1.1
EV/EBITDA (x)	7.7	6.0	4.9	4.2
Dividend yield (%)	3.0	3.2	3.7	4.1

Source: Company and Nuvama estimates

Valuation Drivers

Year to March	FY23A	FY24E	FY25E	FY26E
EPS growth (%)	4.0	41.9	18.0	10.0
RoE (%)	16.4	20.6	20.8	19.7
EBITDA growth (%)	12.3	37.5	19.4	11.9
Payout ratio (%)	34.0	25.0	25.0	25.0

About ACPL

- Aquapharm Chemicals Private Limited (ACPL) was incorporated in 1974 in Pune and is largely involved in specialty chemicals, detergents, industrial cleaners, Oil & gas chemicals and water treatment chemicals (globally among top three companies).
- Phosphonates contributes around 53% of the revenue while oil & gas contributes around 25% and the rest is from polymers, which includes biodegradable chelating agents and others.
- The principle plant is in the US while there is another manufacturing plant in Saudi Arabia. In India, there are two manufacturing plants at Mahad and Pirangut. They also have an LEED certified Innovation centre in Pune.
- Multinational companies across North & South America, Europe and Middle East are its customers. Its products are used for water treatment, detergents, industrial cleaning, textiles, reverse osmosis, thermal desalination and oil fields. Some of its customers include Procter & Gamble, Hindustan Unilever, etc.
- ACPL offers a diverse range of biodegradable chelates like GLDA, HEIDA, IDS and others. Management of PCBL was quite confident of growth coming in from this segment in the times to come.
- These chelates find extensive applications across various industries including Industrial cleaning, food processing, personal care, textiles etc.
- ACPL manufactures a wide range of organophosphates under the Aquacid brand. These phosphonates offer superior cost effectiveness and performance due to their excellent hydrolytic and thermal stability.
- They are widely used across industries like home and personal care, industrial water treatment and oil & gas.
- Book value of ACPL is estimated at INR10bn. It posted sales of INR20bn and EBITDA of INR4.2bn in FY23.

Exhibit 1: Financial Performance of ACPL

(Inr mn)	FY21	FY22	FY23	H1 FY24
Revenue	9,430	16,540	20,450	10,000
YoY (%)		*75.4%*	*23.6%*	
EBITDA	1,590	4,230	4,170	1,900
EBITDA Margin	*16.9%*	*25.6%*	*20.4%*	*19.0%*

Source: Company, Nuvama Research

Conference Call Highlights

- The board of directors of PCBL has given the Initial approval for acquisition of Aquafarm Chemicals Private Limited (ACPL) at a total cost of INR38bn. This amount represents the entire 100% of the issued and paid up capital of ACPL.
- A INR38bn of acquisition cost comes at a valuation of 9.1x FY23 EBITDA. Acquisition cost also includes around INR4.5bn worth of working capital, included in business.
- The proposed transaction shall be financed through a mix of internal accruals and external fund raise by PCBL or its affiliates/ associates. This acquisition is likely to be complete in the next two-three months.
- This acquisition will help PCBL to foray into specialty chemicals segment specifically into phosphonates and amino acid derivatives.
- Management has shown confidence to pay the debt in the next 30 months from the cumulative cash flow, which will be generated by both the entities. They expect cumulative EBITDA over next three years of INR40bn.
- PCBL will improve efficiency of ACPL by improving the supply chain as well as procurement.
- FY24 has been tough for ACPL, but it has started seeing early signs of improvement in October. It is confident that this improving trend would continue and Q4 would be in line with earlier times.
- ***Green Chelates***- Total market size of green chelates is estimated to be around 130,000 tonnes while ACPL just has a capacity of 3,300 tones. PCBL management plans to increase this capacity by 20x in the next five years. This is since the segment offers strong growth and ACPL's existing product basket is likely to help gain market share in this segment.
- ***Competition - Italmach commentary on Q3CY23 results is cautious about current growth***- "Macro environment remains challenging, burdened by weak global demand, even after de-stocking normalisation, paired with higher interest rates and persistent core inflation".

Company description

PCBL, a part of RP-Sanjiv Goenka Group is the largest carbon-black producer in India by capacity. PCBL was set up in association with Phillips Petroleum a US-based company in 1960. PCBL commenced its commercial production in Dec-62 with 14ktpa plant in Durgapur, using oil furnace technology. PCBL had a technical collaboration with Columbian Chemical for about a decade. In FY97, Carbon and Chemicals India Ltd was amalgamated with the company. By FY04, PCBL had three plants at Durgapur, Palej and Kochi with a total capacity of 270ktpa.

Investment theme

In the carbon-black market, PCBL enjoys an indomitable 50% market share in India, 11%-globally and 17%-world ex-China. Furthermore, we see the global market share in the profitable speciality-carbon-black market increasing to 5.9% by FY25E (FY22: 3.6%). Even in rubber and performance chemicals grade, we expect the market share to rise by 30bp in both categories. On the ESG front, the company outscores its global peers in areas such as GHG intensity (Scope 1) – 1.43tCO2e/t vs. 2.28tCO2e/t and water intensity- 6.2m3/t vs. 9.2m3/t. The company's long-term targets is demonstrative of its focussed pursuit towards a spirited advancement.

In a business that enjoys little margin volatility, owing to the cost pass-through mechanism, PCBL is strengthening its market leadership. Key growth drivers includes: i) volume ramp up in core rubber business as 147ktpa Tiruvallur plant ramps up; ii) margin aggrandizement via higher speciality product sales volume (up 10ktpa p.a. through to FY25E) – yielding ~2.6x margin compared to rubber products; and iii) harnessing state-of-the-art technology at the greenfield Chennai plant, resulting in better plant processes and yields. All in all, we see EBITDA margin surpassing 21% (FY22: 12%) and RoE improving to 22% (FY22: 18.8%) through FY25E.

Key Risks

PCBL operates in a very competitive environment with significant dependence on automotive and tyre industries. Automotive industry is particularly susceptible to supply chain disruptions such as semiconductor shortage and calamity such as covid-19, potentially affecting revenue and cash flows adversely.

While operations are largely cost pass-through, the inability to do so, in the absence of a firm binding contract might have an impact on profitability.

Besides, there is a need for constant innovation due to variations and changes required. The threat of substitution from silica precipitate, advanced materials and fused alloys remains.

PCBL is subject to significant environmental and regulatory risks. Globally, carbon black is being investigated as a potential carcinogenic and nano-scale material. Any development in this regard, could have a significant impact on the company's sales volumes and cashflows.

Additional Data

Management

Chairman	Sanjiv Goenka
Managing Director	Kaushik Roy
CFO	Raj Kumar Gupta
Auditor	S. R. Batliboi & Co. LLP

Holdings – Top 10*

	% Holding		% Holding
ICICI Prudentia	2.82	Investment Trus	0.32
HDFC AMC	1.67	WisdomTree Inc	0.29
Dimensional Fun	1.19	Bank of India I	0.20
LIC Mututal Fun	0.42	Blackrock Inc	0.16
Aware super Pty	0.34		

*Latest public data

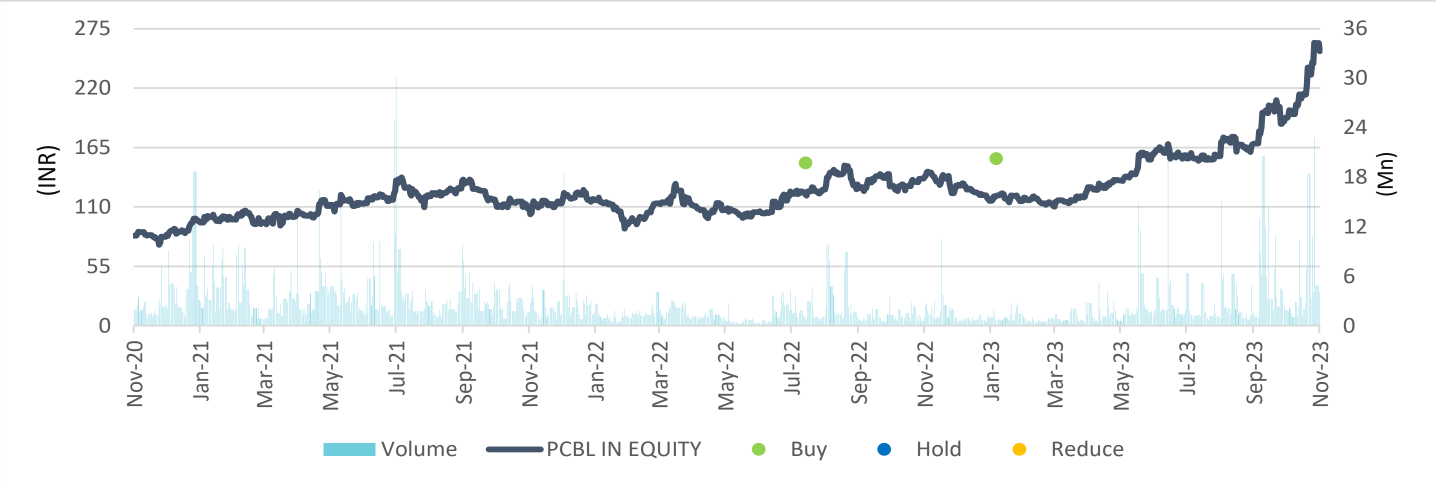
Recent Company Research

Date	Title	Price	Reco
17-Oct-23	Superior product mix drives margins; *Result Update*	198	Buy
12-Jul-23	Margins stable; demand buoyant; *Result Update*	163	Buy
18-May-23	Tracking expectations; *Result Update*	131	Buy

Recent Sector Research

Date	Name of Co./Sector	Title
25-Apr-19	Chemical	Chemspec: Party for domestic manufacture; *Sector Update*

Rating and Daily Volume Interpretation



Source: Bloomberg, Nuvama research

Rating Rationale & Distribution: Nuvama Research

Rating	Expected absolute returns over 12 months	Rating Distribution
Buy	15%	209
Hold	<15% and >-5%	58
Reduce	<-5%	18

DISCLAIMER

Nuvama Wealth Management Limited (formerly Edelweiss Securities Limited) (defined as “NWML” or “Research Entity”) a company duly incorporated under the Companies Act, 1956 (CIN No U67110MH1993PLC344634) having its Registered office situated at 801- 804, Wing A, Building No. 3, Inspire BKC, G Block, Bandra Kurla Complex, Bandra East, Mumbai – 400 051 is regulated by the Securities and Exchange Board of India (“SEBI”) and is licensed to carry on the business of broking, Investment Adviser, Research Analyst and other related activities. Name of Compliance/Grievance officer: Mr. Atul Bapna, E-mail address: complianceofficer.nwm@nuvama.com Contact details +91 (22) 6623 3478 Investor Grievance e-mail address-grievance.nwm@nuvama.com.

This Report has been prepared by NWML in the capacity of a Research Analyst having SEBI Registration No.INH000011316 and distributed as per SEBI (Research Analysts) Regulations 2014. This report does not constitute an offer or solicitation for the purchase or sale of any financial instrument or as an official confirmation of any transaction. Securities as defined in clause (h) of section 2 of the Securities Contracts (Regulation) Act, 1956 includes Financial Instruments and Currency Derivatives. The information contained herein is from publicly available data or other sources believed to be reliable. This report is provided for assistance only and is not intended to be and must not alone be taken as the basis for an investment decision. The user assumes the entire risk of any use made of this information. Each recipient of this report should make such investigation as it deems necessary to arrive at an independent evaluation of an investment in Securities referred to in this document (including the merits and risks involved), and should consult his own advisors to determine the merits and risks of such investment. The investment discussed or views expressed may not be suitable for all investors.

This information is strictly confidential and is being furnished to you solely for your information. This information should not be reproduced or redistributed or passed on directly or indirectly in any form to any other person or published, copied, in whole or in part, for any purpose. This report is not directed or intended for distribution to, or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, where such distribution, publication, availability or use would be contrary to law, regulation or which would subject NWML and associates, subsidiaries / group companies to any registration or licensing requirements within such jurisdiction. The distribution of this report in certain jurisdictions may be restricted by law, and persons in whose possession this report comes, should observe, any such restrictions. The information given in this report is as of the date of this report and there can be no assurance that future results or events will be consistent with this information. This information is subject to change without any prior notice. NWML reserves the right to make modifications and alterations to this statement as may be required from time to time. NWML or any of its associates / group companies shall not be in any way responsible for any loss or damage that may arise to any person from any inadvertent error in the information contained in this report. NWML is committed to providing independent and transparent recommendation to its clients. Neither NWML nor any of its associates, group companies, directors, employees, agents or representatives shall be liable for any damages whether direct, indirect, special or consequential including loss of revenue or lost profits that may arise from or in connection with the use of the information. Our proprietary trading and investment businesses may make investment decisions that are inconsistent with the recommendations expressed herein. Past performance is not necessarily a guide to future performance .The disclosures of interest statements incorporated in this report are provided solely to enhance the transparency and should not be treated as endorsement of the views expressed in the report. The information provided in these reports remains, unless otherwise stated, the copyright of NWML. All layout, design, original artwork, concepts and other Intellectual Properties, remains the property and copyright of NWML and may not be used in any form or for any purpose whatsoever by any party without the express written permission of the copyright holders.

NWML shall not be liable for any delay or any other interruption which may occur in presenting the data due to any reason including network (Internet) reasons or snags in the system, break down of the system or any other equipment, server breakdown, maintenance shutdown, breakdown of communication services or inability of the NWML to present the data. In no event shall NWML be liable for any damages, including without limitation direct or indirect, special, incidental, or consequential damages, losses or expenses arising in connection with the data presented by the NWML through this report.

We offer our research services to clients as well as our prospects. Though this report is disseminated to all the customers simultaneously, not all customers may receive this report at the same time. We will not treat recipients as customers by virtue of their receiving this report. The security/securities quoted in the above report are for illustration only and are not recommendatory.

NWML and its associates, officer, directors, and employees, research analyst (including relatives) worldwide may: (a) from time to time, have long or short positions in, and buy or sell the Securities, mentioned herein or (b) be engaged in any other transaction involving such Securities and earn brokerage or other compensation or act as a market maker in the financial instruments of the subject company/company(ies) discussed herein or act as advisor or lender/borrower to such company(ies) or have other potential/material conflict of interest with respect to any recommendation and related information and opinions at the time of publication of research report or at the time of public appearance. (c) NWML may have proprietary long/short position in the above mentioned scrip(s) and therefore should be considered as interested. (d) The views provided herein are general in nature and do not consider risk appetite or investment objective of any particular investor; readers are requested to take independent professional advice before investing. This should not be construed as invitation or solicitation to do business with NWML (e) Registration granted by SEBI and certification from NISM in no way guarantee performance of NWML or provide any assurance of returns to investors and clients.

NWML or its associates may have received compensation from the subject company in the past 12 months. NWML or its associates may have managed or co-managed public offering of securities for the subject company in the past 12 months. NWML or its associates may have received compensation for investment banking or merchant banking or brokerage services from the subject company in the past 12 months. NWML or its associates may have received any compensation for products or services other than investment banking or merchant banking or brokerage services from the subject company in the past 12 months. NWML or its associates have not received any compensation or other benefits from the Subject Company or third party in connection with the research report. Research analyst or his/her relative or NWML’s associates may have financial interest in the subject company. NWML and/or its Group Companies, their Directors, affiliates and/or employees may have interests/ positions, financial or otherwise in the Securities/Currencies and other investment products mentioned in this report. NWML, its associates, research analyst and his/her relative may have other potential/material conflict of interest with respect to any recommendation and related information and opinions at the time of publication of research report or at the time of public appearance.

Participants in foreign exchange transactions may incur risks arising from several factors, including the following: (i) exchange rates can be volatile and are subject to large fluctuations; (ii) the value of currencies may be affected by numerous market factors, including world and national economic, political and regulatory events, events in equity and debt markets and changes in interest rates; and (iii) currencies may be subject to devaluation or government imposed exchange controls which could affect the value of the currency. Investors in securities such as ADRs and Currency Derivatives, whose values are affected by the currency of an underlying security, effectively assume currency risk.

Research analyst has served as an officer, director or employee of subject Company: No

NWML has financial interest in the subject companies: No

NWML’s Associates may have actual / beneficial ownership of 1% or more securities of the subject company at the end of the month immediately preceding the date of publication of research report.

Research analyst or his/her relative has actual/beneficial ownership of 1% or more securities of the subject company at the end of the month immediately preceding the date of publication of research report: No

NWML has actual/beneficial ownership of 1% or more securities of the subject company at the end of the month immediately preceding the date of publication of research report: No

Subject company may have been client during twelve months preceding the date of distribution of the research report.

There were no instances of non-compliance by NWML on any matter related to the capital markets, resulting in significant and material disciplinary action during the last three years.

A graph of daily closing prices of the securities is also available at www.nseindia.com

Analyst Certification:

The analyst for this report certifies that all of the views expressed in this report accurately reflect his or her personal views about the subject company or companies and its or their securities, and no part of his or her compensation was, is or will be, directly or indirectly related to specific recommendations or views expressed in this report.

Additional Disclaimers

Disclaimer for U.S. Persons

This research report is a product of NWML, which is the employer of the research analyst(s) who has prepared the research report. The research analyst(s) preparing the research report is/are resident outside the United States (U.S.) and are not associated persons of any U.S. regulated broker-dealer and therefore the analyst(s) is/are not subject to supervision by a U.S. broker-dealer, and is/are not required to satisfy the regulatory licensing requirements of FINRA or required to otherwise comply with U.S. rules or regulations regarding, among other things, communications with a subject company, public appearances and trading securities held by a research analyst account.

This report is intended for distribution by NWML only to "Major Institutional Investors" as defined by Rule 15a-6(b)(4) of the U.S. Securities and Exchange Act, 1934 (the Exchange Act) and interpretations thereof by U.S. Securities and Exchange Commission (SEC) in reliance on Rule 15a 6(a)(2). If the recipient of this report is not a Major Institutional Investor as specified above, then it should not act upon this report and return the same to the sender. Further, this report may not be copied, duplicated and/or transmitted onward to any U.S. person, which is not the Major Institutional Investor.

In reliance on the exemption from registration provided by Rule 15a-6 of the Exchange Act and interpretations thereof by the SEC in order to conduct certain business with Major Institutional Investors, NWML has entered into an agreement with a U.S. registered broker-dealer, Nuvama Financial Services Inc.(formerly Edelweiss Financial Services Inc.) ("NFSI"). Transactions in securities discussed in this research report should be effected through NFSI.

Disclaimer for U.K. Persons

The contents of this research report have not been approved by an authorised person within the meaning of the Financial Services and Markets Act 2000 ("FSMA").

In the United Kingdom, this research report is being distributed only to and is directed only at (a) persons who have professional experience in matters relating to investments falling within Article 19(5) of the FSMA (Financial Promotion) Order 2005 (the "Order"); (b) persons falling within Article 49(2)(a) to (d) of the Order (including high net worth companies and unincorporated associations); and (c) any other persons to whom it may otherwise lawfully be communicated (all such persons together being referred to as "relevant persons").

This research report must not be acted on or relied on by persons who are not relevant persons. Any investment or investment activity to which this research report relates is available only to relevant persons and will be engaged in only with relevant persons. Any person who is not a relevant person should not act or rely on this research report or any of its contents. This research report must not be distributed, published, reproduced or disclosed (in whole or in part) by recipients to any other person.

Disclaimer for Canadian Persons

This research report is a product of NWML, which is the employer of the research analysts who have prepared the research report. The research analysts preparing the research report are resident outside the Canada and are not associated persons of any Canadian registered adviser and/or dealer and, therefore, the analysts are not subject to supervision by a Canadian registered adviser and/or dealer, and are not required to satisfy the regulatory licensing requirements of the Ontario Securities Commission, other Canadian provincial securities regulators, the Investment Industry Regulatory Organization of Canada and are not required to otherwise comply with Canadian rules or regulations regarding, among other things, the research analysts' business or relationship with a subject company or trading of securities by a research analyst.

This report is intended for distribution by NWML only to "Permitted Clients" (as defined in National Instrument 31-103 ("NI 31-103")) who are resident in the Province of Ontario, Canada (an "Ontario Permitted Client"). If the recipient of this report is not an Ontario Permitted Client, as specified above, then the recipient should not act upon this report and should return the report to the sender. Further, this report may not be copied, duplicated and/or transmitted onward to any Canadian person.

NWML is relying on an exemption from the adviser and/or dealer registration requirements under NI 31-103 available to certain international advisers and/or dealers. Please be advised that (i) NWML is not registered in the Province of Ontario to trade in securities nor is it registered in the Province of Ontario to provide advice with respect to securities; (ii) NWML's head office or principal place of business is located in India; (iii) all or substantially all of NWML's assets may be situated outside of Canada; (iv) there may be difficulty enforcing legal rights against NWML because of the above; and (v) the name and address of the NWML's agent for service of process in the Province of Ontario is: Bamac Services Inc., 181 Bay Street, Suite 2100, Toronto, Ontario M5J 2T3 Canada.

Disclaimer for Singapore Persons

In Singapore, this report is being distributed by Nuvama Investment Advisors Private Limited (NIAPL) (Previously Edelweiss Investment Advisors Private Limited ("EIAPL")) (Co. Reg. No. 201016306H) which is a holder of a capital markets services license and an exempt financial adviser in Singapore and (ii) solely to persons who qualify as "institutional investors" or "accredited investors" as defined in section 4A(1) of the Securities and Futures Act, Chapter 289 of Singapore ("the SFA"). Pursuant to regulations 33, 34, 35 and 36 of the Financial Advisers Regulations ("FAR"), sections 25, 27 and 36 of the Financial Advisers Act, Chapter 110 of Singapore shall not apply to NIAPL when providing any financial advisory services to an accredited investor (as defined in regulation 36 of the FAR. Persons in Singapore should contact NIAPL in respect of any matter arising from, or in connection with this publication/communication. This report is not suitable for private investors.

Disclaimer for Hong Kong persons

This report is distributed in Hong Kong by Nuvama Investment Advisors (Hong Kong) Private Limited (NIAHK) (Previously Edelweiss Securities (Hong Kong) Private Limited (ESHK)), a licensed corporation (BOM -874) licensed and regulated by the Hong Kong Securities and Futures Commission (SFC) pursuant to Section 116(1) of the Securities and Futures Ordinance "SFO". This report is intended for distribution only to "Professional Investors" as defined in Part I of Schedule 1 to SFO. Any investment or investment activity to which this document relates is only available to professional investor and will be engaged only with professional investors." Nothing here is an offer or solicitation of these securities, products and services in any jurisdiction where their offer or sale is not qualified or exempt from registration. The report also does not constitute a personal recommendation or take into account the particular investment objectives, financial situations, or needs of any individual recipients. The Indian Analyst(s) who compile this report is/are not located in Hong Kong and is/are not licensed to carry on regulated activities in Hong Kong and does not / do not hold themselves out as being able to do so.

INVESTMENT IN SECURITIES MARKET ARE SUBJECT TO MARKET RISKS. READ ALL THE RELATED DOCUMENTS CAREFULLY BEFORE INVESTING.

Abneesh Roy
Head of Research Committee
Abneesh.Roy@nuvama.com

ABNEESH KUMAR ROY

Digitally signed by ABNEESH KUMAR ROY
DN: c=IN, o=PERSONAL,
pseudonym=bc9e9ca1dfaf0fe0f719606f888bd68d,
2.5.4.20=94D8B562953A21CEAD76812230FD36A30252F71AF914A3B962677D8BC9798437,
postalCode=400098, st=MAHARASHTRA,
serialNumber=7370c9de10fb28bbf7cbc6f71afe3cfe848fa7245a8d681629dc3093fb2a8ea9,
cn=ABNEESH KUMAR ROY
Date: 2023.11.28 22:43:12 +05'30'
Adobe Acrobat version: 2023.006.20360